

AMENDMENTS TO THE CLAIMS

This listing replaces all prior versions and listings of claims in the application.

Listing of Claims

1. – 21. (Cancelled)

22. (Previously Presented) The method of claim 24, wherein two optical fibers are employed, said monitoring light is transmitted through the first optical fiber, and said welding laser is transmitted through the second optical fiber.

23. (Previously Presented) The method of claim 22, wherein the distal end of the first optical fiber and the distal end of the second optical fiber are located at the same position.

24. (Currently Amended) A method for closing a hole formed in a blood vessel wall of a subject by a sheath holding a catheter that was inserted into the blood vessel wall, comprising:

(A) introducing into the sheath at least one of a first optical fiber and a second optical fiber; then

(B) transmitting monitoring light through [[an]] an element selected from the first optical fiber and the second optical fiber in the sheath, from the proximal end of said element fiber to its distal end[[,]] and onto tissue of the subject; then

(C) monitoring the amount of light backscattered from tissue in the subject to ascertain when there is a rise in intensity of backscattered light that is absorbed into the tissue in the subject, where such rise is indicative that and, when the tissue that surrounds the distal end of the optical fiber is determined to be element is a blood vessel wall; and then

(D) generating a welding laser and transmitting it through the element optical fiber in the sheath to impinge on the hole in the blood vessel wall while the sheath and the optical fiber, the distal end of which is surrounded by the tissue, are pulled away from the hole, with the provisos (i) that, when one optical fiber is employed, that optical fiber transmits the monitoring light and the welding laser, respectively, and (ii) that, when two optical fibers are

employed, one optical fiber transmits the monitoring light and the other optical fiber transmits the welding laser.

25. (Currently Amended) The method of claim 24, further comprising fastening an optical fiber to the sheath, ~~thereby providing a fastened optical fiber~~ after step (C) and before step (D), and wherein during step (D), the welding laser is transmitted through the fastened optical fiber while the sheath and the fastened optical fiber are pulled away from the hole.

26. (New) The method of claim 24, further comprising supplying a pigment, that absorbs laser energy, to the hole in the blood vessel wall during step (D).

27. (New) The method of claim 24, further comprising applying a pressure to the hole in the blood vessel wall during step (D).

28. (New) The method of claim 27, wherein the pressure is applied by a balloon or stent from inside of a blood vessel having the blood vessel wall.

29. (New) The method of claim 24, further comprising measuring a temperature at the distal end of the one of the first optical fiber and the second optical fiber with a temperature measuring element.

30. (New) The method of claim 29, wherein the temperature measuring element comprises a thermocouple.

31. (New) The method of claim 24, further comprising moving the one of the first optical fiber and the second optical fiber during step (C) manually or by a procession propelling element.

32. (New) The method of claim 31, wherein the procession propelling element comprises a micrometer screw.